AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (**Currently Amended**) A process for preparing an F_2-containing gas comprising ~~the steps of~~:

exciting at least one fluoro compound in a fluoro compound-containing gas by conferring energy on the fluoro compound-containing gas under reduced pressure; and

partially or completely converting the excited fluoro compound-containing gas containing the excited fluoro compound into F_2 under ~~normal~~ atmospheric pressure or a pressure that is over atmospheric pressure ~~overpressure~~.

2. (**Currently Amended**) The process for preparing an F_2-containing gas of claim 1, wherein the ~~step of~~ exciting of a fluoro compound is performed in a first zone maintained under reduced pressure; and

the ~~step of~~ converting of the excited fluoro compound-containing gas ~~the gas~~ into F_2 is performed in a second zone communicating with the first zone and maintained under ~~normal~~ atmospheric pressure or a pressure that is over atmospheric pressure ~~overpressure~~.

3. (**Currently Amended**) The process for preparing an F_2-containing

gas of claim 1 wherein the ~~step of~~ exciting of a fluoro compound is performed in a first zone maintained under reduced pressure; and

during transportation of the excited fluoro compound-containing gas to a second zone communicating with the first zone via a transportation system, the ~~step of~~ converting of the excited fluoro compound-containing gas into F_2 comprises maintaining the pressure in the transportation system ~~under a normal~~ at atmospheric pressure or a pressure that is over atmospheric pressure ~~overpressure condition during transportation of the excited fluoro compound-containing gas to a second zone communicating with the first zone~~.

4. (**Currently Amended**) The process for preparing an F_2-containing gas of claim 1, wherein the ~~step of~~ exciting of a fluoro compound is performed in a first zone maintained under reduced pressure; and

the ~~step of~~ converting of the excited fluoro compound-containing gas ~~the gas~~ into F_2 is performed by maintaining the pressure in the first zone ~~under a normal~~ at atmospheric pressure or a pressure that is over atmospheric pressure ~~overpressure condition~~.

5. (**Currently Amended**) The process for preparing an F_2-containing gas of claim 1, wherein the ~~step of~~ exciting of a fluoro compound is performed in a first chamber maintained under reduced pressure; and

the ~~step of~~ converting of the excited fluoro compound-containing gas ~~the gas~~ into F_2 comprises transporting the excited fluoro compound-containing gas containing the excited fluoro

compound from the first chamber to a second chamber maintained under ~~normal~~ atmospheric pressure or a pressure that is over atmospheric pressure ~~overpressure~~ via a gas channel connecting the first chamber and the second chamber.

6. (**Currently Amended**) The process for preparing an F_2-containing gas of claim 1, wherein the ~~step of~~ exciting of a fluoro compound is performed in a first chamber maintained under reduced pressure; and

the ~~step of~~ converting of the excited fluoro compound-containing gas ~~the gas~~ into F_2 comprises maintaining the pressure in ~~the~~ a transportation system ~~under a normal~~ at atmospheric pressure or a pressure that is over atmospheric pressure ~~overpressure condition~~ during transportation of the excited fluoro compound-containing gas containing the excited fluoro compound from the first chamber to a second chamber via a gas channel connecting the first chamber and the second chamber.

7. (**Currently Amended**) The process for preparing an F_2-containing gas of claim 1, wherein the ~~step of~~ exciting of a fluoro compound is performed in a first chamber maintained under reduced pressure; and

the ~~step of~~ converting of the excited fluoro compound-containing gas ~~the gas~~ into F_2 is performed in the first chamber by maintaining the first chamber under ~~normal~~ atmospheric pressure or a pressure that is over atmospheric pressure ~~overpressure~~.

8. (**Currently Amended**) The process for preparing an F_2-containing

gas of claim 5, wherein a vacuum pump is provided in a gas channel connecting the first chamber and the second chamber and said vacuum pump is used during the ~~step of~~ transporting of the excited fluoro compound-containing gas from the first chamber to the second chamber.

9. (**Currently Amended**) The process for preparing an F_2-containing gas of claim 1, wherein the ~~step of~~ exciting of a fluoro compound comprises generating a plasma state of ~~ionizing~~ the fluoro compound-containing gas.

10. (**Original**) The process for preparing an F_2-containing gas of claim 1, wherein the fluoro compound is a gaseous fluoro compound selected from the group consisting of linear, branched or cyclic saturated perfluorocarbons, linear, branched or cyclic unsaturated perfluorocarbons, carbonyl fluorides, perfluoro hypofluorides, perfluoro peroxides, perfluoroether compounds, oxygen-containing fluorides, interhalogen fluorides, iodine-containing fluorides, sulfur-containing fluorides, nitrogen-containing fluorides, silicon-containing fluorides, rare gas-containing fluorides, and combinations thereof.

11. (**Original**) The process for preparing an F_2-containing gas of claim 1, wherein the fluoro compound is selected from the group consisting of CF_4, C_2F_6, C_3F_8, C_4F_{10}, C_5F_{12}, C_6F_{14}, C_2F_4, C_3F_6, C_4F_8, C_5F_{10}, C_6F_{12}, C_4F_6, FCOF, CF_3COF, $CF_2(COF)_2$, C_3F_7COF, CF_3OF, C_2F_5OF, $CF_2(OF)_2$, CF_3COOF, CF_3OOCF_3, CF_3COOOF, CF_3OCF_3, $C_2F_5OC_2F_5$, $C_2F_4OC_2F_4$, OF_2, SOF_2,

SOF_4, NOF, ClF_3, IF_5, BrF_5, BrF_3, CF_3I, C_2F_5I, N_2F_4, NF_3, NOF_3, SiF_4, Si_2F_6, XeF_2, XeF_4, KrF_2, SF_4, SF_6, and a mixture thereof.

12. (**Original**) The process for preparing an F_2-containing gas of claim 1, wherein the fluoro compound-containing gas comprises an inert gas and/or oxygen.

13. (**Original**) The process for preparing an F_2-containing gas of claim 1, wherein the fluoro compound-containing gas comprises an inert gas and/or oxygen, and wherein said inert gas is selected from the group consisting of He, Ne, Ar, Xe, Kr, N_2, and a combination thereof.

14. (**Currently Amended**) The process for preparing an F_2-containing gas of claim 1, wherein the fluoro compound is one or more members selected from the group consisting of NF_3, C_2F_6, and FCOF.

15. (**Currently Amended**) The process for preparing an F_2-containing gas of claim 14, wherein generation of a plasma state of the fluoro compound is conducted ~~ionized~~ in the presence of oxygen when ~~it~~ the fluoro compound is a perfluorocarbon or a mixture containing one or more perfluorocarbons.

16. (**Currently Amended**) A process for modifying a surface of an article comprising contacting an F_2-containing gas with the surface of the article under reduced pressure or a pressure that is over

atmospheric pressure ~~overpressure~~ or ~~normal~~ atmospheric pressure, wherein said F_2-containing gas is obtained by a process comprising ~~the steps of~~:

exciting at least one fluoro compound in a fluoro compound-containing gas by conferring energy on the fluoro compound-containing gas under reduced pressure; and

partially or completely converting the excited fluoro compound-containing gas containing the excited fluoro compound into F_2 under ~~normal~~ atmospheric pressure or a pressure that is over atmospheric pressure ~~overpressure~~.

17. (**Currently Amended**) The surface modification process of claim 16, further comprising ~~the step of~~ introducing an inert gas and/or oxygen after conferring energy on the fluoro compound-containing gas before contacting the F_2-containing gas ~~the gas~~ with the article to be surface-modified.

18. (**Original**) The surface modification process of claim 16, wherein the surface modification is performed by fluorinating the surface of the article.

19. (**Original**) The surface modification process of claim 16, wherein the article to be surface-modified is one or more members selected from the group consisting of metals, metal compounds and polymers.

20. (**Original**) The surface modification process of claim 19, wherein the polymer is an article based on polypropylene.

21. (**Original**) The surface modification process of claim 19, wherein the metal compound is one or more members selected from the group consisting of metal oxides, metal nitrides, metal carbides, metal hydroxides and metal chlorides.

22. (**Original**) The surface modification process of claim 19, wherein the metal compound is a compound based on Si.

23. (**Original**) The surface modification process of claim 22, wherein the compound based on Si is Si, SiO_2, Si_3N_4, SiC, polysilicon, amorphous silicon, or a combination thereof.

24. (**Original**) The surface modification process of claim 22, wherein the compound based on Si is deposited in an LPCVD equipment.

25. (**Withdrawn-Currently amended**) An equipment for preparing an F_2-containing gas comprising:

a means for generating a plasma state of ~~ionizing~~ a fluoro compound-containing gas under reduced pressure; and

a pressure controlling means communicating with the plasma generating ~~ionizing~~ means and controlling the pressure of the ~~ionized~~ fluoro compound-containing gas subjected to plasma generation at a condition of ~~normal~~ atmospheric pressure or a pressure that is over

atmospheric pressure ~~overpressure condition~~.

26. (**Withdrawn-Currently amended**) A surface modification equipment comprising a means communicating with the pressure controlling means in the equipment for preparing an F_2-containing gas of claim 25, and positioning an article whose surface should be contacted with the F_2-containing gas prepared in the equipment for preparing an F_2-containing gas under reduced pressure or a pressure that is over atmospheric pressure ~~overpressure~~ or ~~normal~~ atmospheric pressure.

27. (**Withdrawn**) The surface modification equipment of claim 26, further comprising a vacuum pump or compressor communicating with the means for positioning the article.

28. (**Withdrawn**) A method for using the equipment of claim 25, to directly fluorinate an organic and/or inorganic material.

29. (**Currently amended**) The process for preparing an F_2-containing gas of claim 6, wherein a vacuum pump is provided in a gas channel connecting the first chamber and the second chamber and said vacuum pump is used during ~~the step of~~ transporting of the excited fluoro compound-containing gas from the first chamber to the second chamber.

30. (**New**) A process for modifying a surface of an article comprising contacting an F_2-containing gas with the surface of the article under reduced pressure or a pressure that is over atmospheric

pressure or atmospheric pressure, wherein said F_2-containing gas is obtained by a process comprising:

exciting at least one fluoro compound in a fluoro compound-containing gas by conferring energy on the fluoro compound-containing gas under reduced pressure; and

partially or completely converting the excited fluoro compound-containing gas containing the excited fluoro compound into F_2 under atmospheric pressure or a pressure that is over atmospheric pressure,

wherein the exciting of a fluoro compound is performed in a first chamber maintained under reduced pressure; and

the converting of the excited fluoro compound- containing gas into F_2 comprises transporting the excited fluoro compound-containing gas containing the excited fluoro compound from the first chamber to a second chamber maintained under atmospheric pressure or a pressure that is over atmospheric pressure via a gas channel connecting the first chamber and the second chamber.